PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 7837
Nagarajan Rajagopalan et al.	Examiner: Keath T. Chen
Application No.: 10/783,316	Technology Center/Art Unit: 1709
Filed: February 20, 2004	RESPONSE TO OFFICE ACTION Mailed August 8, 2007
For: METHODS AND APPARATUSES PROMOTING ADHESION OF DIELECTRIC BARRIER FILM TO COPPER	
Customer No.: 57385	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed August 8, 2007, please enter the following amendments and remarks. A petition for a two month extension of time to submit this response is being submitted herewith.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Amendments to the Drawings begin on page 6 of this paper and include both an attached replacement sheet and an annotated sheet showing changes.

Remarks/Arguments begin on page 7 of this paper.

An **Appendix** including amended drawing figures is attached following page 9 of this paper.

Amendments to the Specification:

Please replace ¶**[0045]** with the following amended paragraph:

[0045] Figure 7 shows a schematic diagram of gas supply panel in accordance with one embodiment of the present invention, for use with the PECVD chamber just described. Gas supply panel 90 comprises first inlet 61, second inlet 62, third inlet 63, fourth inlet 64, ~~and~~ fifth inlet 65, and sixth inlet 700. First and second inlets 61 and 62 are configured to receive a flow of a processing gas through valves 61a and 62a, respectively, and to flow these processing gas through block final valve 66 into processing chamber 30. Examples of such processing gases include helium and nitrogen.

Please replace ¶**[0048]** with the following amended paragraph:

[0048] Similarly, second injection valve 70 is configured to receive a flow of another processing material, for example ammonia, from fifth inlet 65. This processing material is also injected into the purge gas flowing through second injection valve 70, and is carried into chamber by successive flow through valve 43, mass flow controller 48, shutoff valve 49, and block final valve 66. Third injection valve 702 can be configured to receive a flow of another processing material from sixth inlet 700. This processing material can be injected into the purge gas flowing through valve 704, mass flow controller 706, shutoff valve 708, and block final valve 66.

Please replace ¶**[0055]** with the following amended paragraph:

[0055] Figure 3 presents one process recipe in tabular form for the various steps for forming a silicide layer utilizing the PRODUCER SE tool, over copper features patterned on a 300 mm diameter wafer in accordance with one embodiment of the present invention. Figure 3 shows the changed state of the divert valve between steps ~~212~~ 206 and ~~214~~ 208 of Figure 2.